US Army Medical Research and Materiel

Technology Available for Licensing

Nucleotide Sequences Encoding the Expression of a Hantaan Virus Nucleocapsid Protein and G1 and G2 Glycoproteins

Features and advantages:

- **Identifies nucleotide sequences for expression as polypeptides that exhibit nucleocapsid protein or G1 or G2 glycoprotein characteristics**
- **Enables cDNA molecules to be constructed and inserted into vectors**
- **Produces immunogenic proteins of Hantaan virus without propagating live Hantaan viruses**

This invention provides the identification of nucleotide sequences that can be expressed to obtain polypeptides exhibiting the characteristics of Hantaan virus G1 and G2 glycoproteins and nucleocapsid (N) protein. The invention includes a method for producing immunogenic proteins of the Hantaan virus, without the need to propagate live Hantaan viruses.

The Hantaan virus causes Korean hemorrhagic fever by infecting thousands of people per year in endemic areas, which include China and Korea. High morbidity and mortality occur among the natives as well as visitors and service personnel assigned to those areas. There is no known cure for the infection, which ends with either development of natural immunity against the virus, or death. As the Hantaan virus is extremely infectious, its containment for research purposes poses significant problems. It has been impractical to grow large quantities of live Hantaan virus to extract its immunogenic portions for vaccination purposes. The invention provides the nucleotide sequences that encode the antigenic portions of the Hantaan virus and makes it possible to synthesize the antigens in a cell-free system.

The antigens could, potentially, be used as a genetically engineered vaccine or as a diagnostic method. Furthermore, if Hantaan viral infections could be diagnosed at an early stage, proper patient management may improve prognosis of the disease.

Patent Status

Patent No.: 5,298,423 **Available From:** www.uspto.gov
Issued: March 29, 1994 **Docket No.:** RMD 87.04

Point of Contact

Dr. Paul C. Mele
Director, Office of Research and Technology Applications
USAMRMC, MCMR-ZA-J
504 Scott St., Ft. Detrick, MD 21702-5012
E-mail: usamrmcorta@amedd.army.mil
Voice: 301-619-6664/2032/7219 Fax: 301-619-5034
KEYWORDS: Hantaan, KHF, nucleocapsid, glycoproteins, sequences

Licensing Opportunities • Patent licenses are available to companies with commercial interests